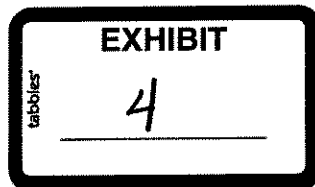


DEPOSITION OF STOYAN TERZIEV
IN THE MATTER OF THE COMPLAINT OF ETERNITY SHIPPING, LTD.
May 27, 2003

CONDENSED TRANSCRIPT AND KEYWORD INDEX



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1 but I didn't have the support to go against the
 2 shipyard to improve the quality and to deliver
 3 the quality I wish to have on board the ship.
 4 Q When you say "this guy" you mean
 5 the Chinese surveyor?
 6 A Yes. So we finished the job and
 7 took all the certificates and testing, but they
 8 were not the same; I knew. Any inspector coming
 9 on board the ship would not find any
 10 recommendation or deficiency, but I knew that
 11 here I may have problem, maybe, because I didn't
 12 manage to control properly and to press properly
 13 the shipyard to deliver to me a proper and my
 14 quality job.
 15 Then we finished these two repairs
 16 and Mr. Kekridis told me that we have one new
 17 delivery and Leon I is coming for retrofitting
 18 the cranes, so I fly in from Kuang Zhou to
 19 Shanghai. In what connection I tell you this? I
 20 had a long conversation with Mr. Kekridis asking
 21 and insisting to have an American or European
 22 surveyor on board the ship. I was insisting very
 23 much because I saw the difference and a few days
 24 after Mr. Kekridis told me that he was contacting
 25 the office in Hong Kong I think, and Shanghai,

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1 and Roy Graham will come to be the surveyor.
 2 We didn't manage to make the same
 3 with Lloyds with the other vessel. We had again
 4 Chinese surveyor.
 5 Q The point being that the American
 6 or British surveyors would assist you or work
 7 with you to make sure that you got good quality
 8 out of the shipyard, correct?
 9 A Yes. If you have European or
 10 American surveyor you are sure that no secrets
 11 will be delivered to you from the shipyard. We
 12 go and check. Colleagues by purpose they take
 13 Chinese surveyors in order to have an easy life
 14 during repair. They have easy life, they can do
 15 less work, they can do only the minimum required
 16 work and save a few thousand dollars, but they
 17 don't know that they have after big troubles
 18 during the two and a half years operation of the
 19 vessel after the repair.
 20 Q I want to clear up a little
 21 confusion. You had indicated when you told us
 22 just now about this experience with Lloyds
 23 Register that it was about three months before
 24 the casualty.
 25 A Not before the casualty, before the

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1 installation of the cranes.
 2 Q Oh. So this experience that you
 3 had with Lloyds Register and the Chinese and the
 4 British surveyors preceded the installation of
 5 the cranes aboard the Leon I by about three
 6 months, is that right?
 7 A No. We finished the repairs in
 8 Kwang Zhou and I fly for Shanghai where after
 9 three days the Leon I came. Three months was
 10 actually from the beginning of the repairs in
 11 Kwang Zhou.
 12 Q But this experience with Lloyds
 13 Register in the shipyard preceded the Leon I
 14 crane installation.
 15 A Yes.
 16 Q You testified before that you have
 17 been involved in three retrofittings of cranes,
 18 is that right?
 19 A Yes.
 20 Q Where does the Leon I rank; was it
 21 first, second or third?
 22 A Actually the first two were
 23 together but the first completed was Leon I. In
 24 Shanghai came the two vessels almost at the same
 25 time Leon I and Christy for retrofitting, special

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1 survey in Christy and intermediate survey in Leon
 2 I and retrofitting of cranes.
 3 Q What was the first time that you
 4 were involved with a crane retrofitting?
 5 A Leon I and Christy together.
 6 Q All right. Where did the Christy
 7 crane retrofitting occur, in the same shipyard?
 8 A In the same shipyard.
 9 Q In China?
 10 A China, Da Dong shipyard.
 11 Q Were these both being done at the
 12 same time?
 13 A Retrofitting was done at the same
 14 time; started almost at the same time but Leon I
 15 completed one month earlier, so Leon I was the
 16 first one to sail with cranes.
 17 Q So tell us what your first
 18 involvement was with respect to the Leon I crane
 19 retrofitting.
 20 A The project started quite long time
 21 before we dismantled the cranes from Yannis K.
 22 Actually we had the project, we had the order
 23 from the management, Mr. Corbetis and Mr.
 24 Bodourogrou. Sometime we dismantled the cranes;
 25 actually this was a long-time-preparing project.

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1 Q Were you involved in any of the
2 preparatory work?
3 A Yes.
4 Q If we can just do this slowly.
5 What was your involvement with the preparatory
6 work?
7 A Okay. The studying was done by
8 Marutec and I was on board, I should go on board
9 two vessels, Leon I and Yannis K, first to see,
10 to inspect very carefully the cranes on the
11 Yannis K, although I knew these cranes quite well
12 because I was in charge with this vessel.
13 Q You were in charge of the Yannis K
14 prior to the time that vessel was scrapped, is
15 that right?
16 A Yes. So I knew the cranes because
17 they were giving troubles and then they are
18 giving good operation. You know we are living
19 with the cranes. The cranes are in a vessel
20 machinery that can make you lose a lot of money
21 and at the same time it's a machinery that you
22 may perform the charter party very good.
23 Q How long did you manage or oversee
24 the Yannis K?
25 A From the very first day in

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1 Eurocarriers; actually two years.
2 Q Did you board that vessel on
3 occasion?
4 A Many times.
5 Q When you say that there were
6 troubles with the cranes, can you tell us what
7 types of troubles?
8 A Yes. Those cranes were electrical,
9 pure electrical, so sometimes you have burned
10 motor. My job is to organize works to remove the
11 motor, to take quotation, to follow repair, to
12 test in the workshop, then to fit on place, then
13 to test on board the vessel. One trouble.
14 Another trouble can be, other work
15 can be replacement of wires, if you are much
16 interesting about this; wiring, contacts.
17 MR. ASPERGER: When you say "replacement
18 of wires" you are talking about electrical wires
19 or --
20 WITNESS: And wire ropes.
21 Then inspection and maintenance of
22 the contactors and contacts, which is the main
23 electrical equipment.
24 Q BY MR. CLYNE: Tell us what the
25 contactors are.

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1 A It's magnetic contacts with movable
2 and not movable contacts, so every face has its
3 own contact. These contacts are of special alloy
4 and silver-plated. There are many contactors,
5 many contacts and auxiliary contactors, auxiliary
6 contacts. So this is the pure circuit of the
7 crane made by contacts which is consist by steady
8 and movable contacts.
9 Q Where are the contactors located?
10 A In the electrical panels which
11 these panels are in the back side of the crane
12 operator and the machinery space of the crane.
13 So the other components are the
14 relays which are giving the signal and orders to
15 the contacts to close or open, and these relays
16 are adjusted or are ordered by different
17 equipment like the joystick, the limit switch.
18 Okay, this is actually controls and --
19 Q Okay.
20 A So this is very, very general
21 description of what these cranes are consisting
22 of.
23 Q All right. Any other problems with
24 the cranes other than that?
25 A Yes. There were brakes,

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1 electromagnetic brakes which are totally
2 independent. I mean they are normally closed,
3 they are normally on, and by giving order to the
4 motor let's say to work, they open. But they are
5 on very strong springs, trying always to push the
6 brakes to close, so a circuit remaining without
7 power supply or any contact with bad contact or
8 any relay which is not giving any signal,
9 immediately the brakes will close because the
10 closing is mechanical. It's by more than thirty
11 very strong springs, so the closing and
12 activating of the brakes has nothing to do, is
13 not ordered by power supply; it's mechanical.
14 There are ferodo disks which are pressed one to
15 the other in order to hold, not to retain the
16 motor. But I say again: they are mechanically
17 operated for closing and electrically operating
18 for opening.
19 Q Did those cranes have limit
20 switches on them?
21 A Yes.
22 Q Did you ever have any problems with
23 the limit switches?
24 A No, because they are very simple
25 system. IHI is the Rolls Royce of the cranes.

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1 IHI we say are the Rolls Royce of the cranes.
 2 Q This is a well-established design,
 3 wasn't it?
 4 A The best. And they are the most
 5 expensive actually; very, very good design.
 6 Limit switch of IHI are very simple and trouble-
 7 free. It is one worm gear and together with the
 8 rotating of the drum one pin is moving left or
 9 right and in the both ends there are switches,
 10 contacts. When this pin or cam is reaching one
 11 end activating the contact and the crane is
 12 stopping, switching off, no power, finish; nobody
 13 can do anything except if you switch off with a
 14 key, one secret key, switch off, eliminate,
 15 disactivate all the limit switches, disconnect
 16 electrically.
 17 Why there is this key? In order to
 18 park in the rest position the jib, because limit
 19 switches in all cranes all over the world are
 20 working ranges 30 degrees up to 70 or 75 degrees
 21 to 78. The lower 30 degrees, it is for all the
 22 cranes.
 23 Q That's the lowest point it can go
 24 to?
 25 A That it can operate the crane, yes.

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1 Q So if I understand you correctly,
 2 in order to bring the crane all the way down to
 3 stow it you need to disconnect limit switches?
 4 A Yes. This is the only time that
 5 somebody is allowed to disconnect the limit
 6 switch. So 30 degrees is fixed for all the
 7 cranes. Upper limit 75 or 78 or 80, it depends
 8 on the maker.
 9 I say this because lower limit
 10 switch is in order to protect overloading the
 11 crane because as bigger is the arm as bigger is
 12 the moment, and then the stresses are higher. So
 13 they say that 30 degrees, the maximum that the
 14 jib will work as a jib after all the load will be
 15 taken by the jib and not the wires. That's why
 16 they say 30 degrees.
 17 Upper limit, nothing to do with the
 18 load because the arm is very small, moment very
 19 small, so no load on the jib and no load on the
 20 wires.
 21 But why then they say you need
 22 limit switch on the upper position? Because on
 23 the upper position the wires may touch somewhere,
 24 the jib may touch somewhere, the sheaves may be
 25 overloaded because the wire becomes very short,

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1 so for different reasons that I don't evaluate
 2 why, it's not my job to ask or evaluate why, they
 3 have also upper limit switch.
 4 But again disactivating the limit
 5 switch you are allowed to do only when you park
 6 the jib in the rest position. This is for
 7 sailing, when you prepare the vessel for sailing,
 8 and this is the only one. In the manual.
 9 Q The IHI manual?
 10 A It is very, very clearly stated,
 11 and this was the main task, safety without
 12 compromises anyway, but I tell you if you open
 13 the manual and you find this paragraph they don't
 14 speak for the lower limit switch. They say do
 15 not heave up more than the limited angle the jib
 16 because this may cause breaking, suspending of
 17 the wire, and this may cause death of personnel.
 18 Q I have seen it.
 19 A We discuss with Tony about this
 20 case and he was very much concerned about the
 21 quality and the condition of the wires, but in
 22 the manual it doesn't say that bad wire to be
 23 broken. In the manual it says the wire will be
 24 broken, so I believe now -- Okay. This is --
 25 Just to clarify again. Lower limit

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1 switch is for overloading of the crane. Upper
 2 limit switch is a design limit switch. They
 3 don't allow this to go this more than 70 or 75 or
 4 78 degrees because the wire may touch somewhere,
 5 may have a friction, may be trapped somewhere.
 6 Q Do you believe that's what happened
 7 with respect to the accident on the Leon I?
 8 A Yes. At that time I had on board
 9 the ship three Bulgarians, one chief engineer and
 10 two fitters, who were personally selected by me
 11 and they were respecting me too much because I
 12 have given them a good, very well-paid job, and
 13 when I visited the vessel after the accident in
 14 Bilbao in order to repair the jib, they told me
 15 actually how happened this.
 16 Q Tell us specifically as you can who
 17 told you and what they said.
 18 A The guys, they were chief engineer
 19 and two fitters. Stoyanov again was the family
 20 name of the chief engineer but he is retired now,
 21 and the fitters, they were from the shipyard.
 22 Now I don't remember the names.
 23 Anyhow, I asked how happened the
 24 accident and the fitters were working on deck;
 25 they had some small fittings on deck to review

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1 Q BY MR. CLYNE: And that key is
 2 located where?
 3 A It is with bosun because only bosun
 4 has the right to operate the crane, so he is the
 5 only one operating the cranes, when some
 6 preparing for discharging, but not discharging
 7 (Short recess)
 8 Q BY MR. CLYNE: Mr. Terziev, when we
 9 last left off we were talking about the limit
 10 switches and your understanding of how this
 11 accident on July 29, 2000, occurred.
 12 Let me go back and ask you this.
 13 The disconnecting of the limit switches in order
 14 to prepare the crane to be at rest and stowed for
 15 sea, that's something that you know based on your
 16 own personal knowledge based on having been on
 17 board the vessel, is that correct?
 18 A Yes.
 19 Q So that has to be done every time,
 20 is that right?
 21 A Yes. Again I am saying that not
 22 only because of my knowledge but because of the
 23 design of the vessel in order to be fixed in the
 24 rest position the jib must be at the zero angle,
 25 but the limit switch is at 30 degrees, and in

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1 order to park the jib in the rest position you
 2 must deactivate the limit switch.
 3 Q Where is the switch with the key to
 4 disconnect the limit switch?
 5 A This is in the crane driver's,
 6 operator's cabin.
 7 Q So somebody would have to go up
 8 there and disconnect or turn the key?
 9 A Yes. Actually somebody is there
 10 operating and when the moment comes to disconnect
 11 it's just --
 12 Q Okay. I would like to go back now
 13 to the time of the beginning of the retrofitting
 14 of the cranes, and in particular I would like to
 15 ask you some questions about the Yannis K, okay?
 16 A Yes.
 17 Q Can you just describe in general --
 18 and I really don't want it in detail -- how the
 19 cranes were removed from the Yannis K.
 20 A The job was done in Dubai by Nikko
 21 International Workshop, one of the biggest
 22 mechanical workshops in Dubai. I think the owner
 23 is Dutch or British.
 24 We have removed the cranes in
 25 parts. First the crew dismounted the wire ropes,

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1 removed the wire ropes from the cranes. This is
 2 a crew job. Removed, stored in two-meters coil,
 3 labeled, after when the time comes for the
 4 retrofitting to know which wire rope is for which
 5 crane.
 6 Q Were you there when the wire ropes
 7 were removed?
 8 A Yes, I was there from the beginning
 9 to the end of the removal of the cranes.
 10 Q Do you know approximately what time
 11 frame this was?
 12 A I will tell you the date when was
 13 the eclipse of the sun; this was the date.
 14 That's why I remember very well, the full -- The
 15 full eclipse of the sun, it was the date exactly.
 16 It was 2000. Maybe we can remember this. It was
 17 summertime, June or August, summertime in Dubai
 18 but --
 19 Q If I were to tell you that the Leon
 20 I went into the shipyard in November of 1999
 21 would that assist you? So sometime in the summer
 22 of 1999?
 23 A Yes.
 24 Q Okay. Now you indicated that you
 25 were there when the wire ropes were removed from

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1 the vessel, is that right?
 2 A Yes.
 3 Q And they were stowed in coils, is
 4 that right?
 5 A Yes.
 6 Q Were they checked before they were
 7 stowed in coils?
 8 A Yes. This is part of my job. I
 9 have this job order from the office because it
 10 was a matter of ordering wire ropes in case we
 11 have some damage.
 12 Q So they were inspected by you, is
 13 that right?
 14 A Yes.
 15 Q Can you tell us how that was done?
 16 A When it's removed first you must
 17 put it all along the deck. The way of removing
 18 is press you to do this job. You start turning
 19 the drum and pull the rope all the way out on the
 20 deck. This is the best time to inspect because
 21 when it's in coil you cannot do.
 22 Q Now all eight wire ropes that were
 23 on board the Yannis K, were associated with the
 24 Yannis K, were inspected?
 25 A Yes.

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1 Q And were they all found to be in
2 good order?
3 A Yes.
4 Q So you didn't see any sort of pre-
5 existing damage on those wire ropes?
6 A No.
7 Q And they were all acceptable. What
8 criteria did you use to determine if they were
9 acceptable?
10 A The criteria of crane maker is
11 quite low to my opinion. They say you have to
12 have 10 percent cut strings in order to scrap, to
13 replace the wire. For me I call this very
14 extreme condition before you replace any wire
15 rope. I have never seen such a wire rope to tell
16 you the truth.
17 Q So your own personal criteria are
18 more conservative than the designer's, being IHI,
19 correct?
20 A Correct. So the wire ropes were
21 very good and this was my report to the office.
22 One wire rope costs 600 or 1000; it's not a huge
23 amount. It's not a matter of saving for the
24 company if you order, but I am taught to be
25 maximum economical technically, so if you see

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1 good wire rope and you don't have reason to
2 suggest these wire ropes to be replaced, you
3 don't do.
4 Q So was each one of these wire ropes
5 laid out on the deck?
6 A Yes.
7 Q And tell us how they were
8 inspected.
9 A When we remove the wire ropes,
10 because I know that they are going to be stored
11 somewhere Nikko International warehouses, a guy
12 from the crew was greasing as they were going
13 down and somebody was pulling, they were
14 greasing. I was there before the wire ropes were
15 greased and you can see if there are any damages.
16 There are two kinds of damages in
17 the wire ropes: one is cutting strands and the
18 other damage is smashed, deformed. The
19 deformation may happen if the wire is trapped in
20 the corner of the hatch coaming or if it is
21 pressed by bulldozer or if they lie on deck,
22 mechanically smashed. Very often you can see
23 this.
24 When the stevedores are not
25 properly trained to operate the cranes then you

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1 can see many hits on the coamings and this is the
2 time you may see some smashed wire rope.
3 And the other is cut strands.
4 Q Okay. And you personally inspected
5 each wire rope, is that correct?
6 A Yes.
7 Q And you didn't see any deformations
8 or -- what was the term that you used?
9 A Smashed.
10 Q You didn't see any smashed
11 sections, correct?
12 MR. ASPERGER: I think the correct term
13 is flattening.
14 Q BY MR. CLYNE: You didn't see any
15 flattening?
16 A No.
17 Q Did you in terms of broken strands
18 -- What is your own personal criteria for
19 whether the wire rope is acceptable in terms of
20 broken strands?
21 A The wire rope is made of six
22 smaller wires. For me what I am changing one of
23 these six small ropes, they have 10 percent cut
24 strands, so it's six times more strict than the
25 one makers are saying.

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1 Q So if one of those particular
2 strands --
3 A There are six small wires consisted
4 by 36 small strands, so the maker say 10 percent
5 of the whole wire strands will be cut everywhere.
6 For me I say one of these six small ropes, 10
7 percent needs to be cut.
8 Q Then you will replace --
9 A Yes.
10 Q And you didn't see that on any of
11 the eight wire ropes, correct?
12 A No. There was no any damage.
13 Q Were there any spare wire ropes on
14 the Yannis K?
15 A It was a spare old wire rope which
16 was not recommended to be as a spare in Leon I.
17 Q So that --
18 A So Leon I sailed from Shanghai, I
19 believe it was without spare wire ropes.
20 Q So the eight wire ropes in service
21 on the Yannis K are the ones that made their way
22 onto the Leon I, is that right?
23 A Yes.
24 Q And you are sure of that based on
25 your own personal knowledge, isn't that right?

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1 then it's the time to sign because the signature
 2 means money. Many times they were trying to
 3 press ABS to accept something which is according
 4 to the rules and then my reply was: "If he pays,
 5 he can accept", because the one who is paying is
 6 the owner.
 7 Q Were the wire ropes inspected in
 8 the shipyard?
 9 A Yes.
 10 Q Who were they inspected by, Mr.
 11 Graham?
 12 A Also by Mr. Graham.
 13 Q And you as well?
 14 A Yes.
 15 Q So you inspected them again, right?
 16 A Yes.
 17 Q And they were found to be
 18 satisfactory?
 19 A Correct.
 20 Q Did you look at the whole wire
 21 rope?
 22 A I tell you why. We should again
 23 lie down on deck, for one reason only, because if
 24 you start putting the wire rope on the drum
 25 direct from the coil the wire rope may be twisted

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1 because it's a double wire block on the end, so
 2 lie down on deck to relieve the stress and roll
 3 the drum.
 4 Q So this was done in this case and
 5 laid out and inspected by you and Mr. Graham?
 6 A Yes. For me for sure. From Roy, I
 7 don't know if he inspected truly, but as I know
 8 how he was working I do not expect that he will
 9 not inspect the wire ropes because he was very,
 10 very in details. His inspections were very
 11 detailed, so --
 12 Q Let's back up again. When the
 13 ropes were laid out you were not with Mr. Graham
 14 at that time?
 15 A I am not going with Roy all the
 16 time. I am not his shadow. He is free to go
 17 anywhere he likes and he is going as per his
 18 discretion on board the ship. For me I know I
 19 have inspected the wire ropes and they were very
 20 good.
 21 Q You inspected them when they came
 22 off the Yannis K and also again before they were
 23 put on the Leon I, is that right?
 24 A Yes.
 25 Q You found them acceptable pursuant

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1 to your own criteria, correct?
 2 A Yes. When you say my own criteria,
 3 it's again I say: which is fully covering the
 4 maker's criteria and much stronger.
 5 Q Were the limit switches tested in
 6 the shipyard?
 7 A Yes.
 8 Q In fact were all of the components
 9 tested as part of operational testing in the
 10 shipyard?
 11 A Operational test is only part of
 12 the testing, so if you ask me only for the
 13 operational testing or for all the testing of the
 14 crane --
 15 Q Let's start with operational
 16 testing and find out what you understand that to
 17 mean.
 18 A Operational testing is the gate to
 19 start the testings of the crane, so before you
 20 start the real testings according to the makers
 21 you must to see with successful operational
 22 testings of the operation testing, first, normal
 23 operation of the cranes: up-down or rotation, jib
 24 up and jib down. This is performing all the
 25 movement of the cranes.

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1 Then you test all the limit
 2 switches. Limit switches of these cranes there
 3 are limit switch runner up, runner maximum down,
 4 jib up and jib down, and overload. So we test
 5 the four limit switches except the overload
 6 during operation because you test the overload
 7 limit switch during the overload test.
 8 Q The limit switches were tested by
 9 whom, the shipyard?
 10 A Operating by the shipyard with the
 11 presence of bosun in the crane because he is the
 12 only one to operate the cranes, and me and Roy.
 13 Q So both you and Mr. Graham observed
 14 the testing of the limit switches, is that
 15 correct?
 16 A Yes.
 17 Q And at that time did you verify the
 18 settings of the limit switches?
 19 A Yes, this is the time we verify the
 20 switches. I don't remember now exactly how much
 21 was the upper limit switch. We can find the
 22 manual because as I say every maker has different
 23 angle of the upper limit switch -- 75, 78. Now
 24 my cranes where I am in charge, they have 73
 25 degrees. So I don't remember exactly what was